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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,253	05/31/2002	Geoffrey Chopping	P/61705-PCT	5027

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KIRSCHSTEIN, OTTINGER, ISRAEL  
& SCHIFFMILLER, P.C.  
489 FIFTH AVENUE  
NEW YORK, NY 10017

EXAMINER
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LIU, JONATHAN

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<p><b>Application No.</b></p> <p align="center">10/031,253</p>	<p><b>Applicant(s)</b></p> <p align="center">CHOPPING ET AL.</p>	
	<p><b>Examiner</b></p> <p align="center">Jonathan Liou</p>	<p><b>Art Unit</b></p> <p align="center">2663</p>	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 May 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 29-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29,30,32-36,43,45-50 and 53-56 is/are rejected.
- 7) ☒ Claim(s) 31, 37-42, 44,51-52 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05/31/2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some    \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 43 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 43, the examiner could not understand what Applicant means by “redundant pairs of the point-to-point interconnections of a twin choice network do not have their terminations on the same pair of sites” recited in the claim 43. Particularly, “redundant pairs” and “twin choice network” are not clear to the examiner.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 29-30, 32-36, 43, 45-46, and 53-56 are rejected under 35 U.S.C. 102(b) as being anticipated by Frene et al. (US Pat No. 5,654,956.)

Regarding Claims 29, 54, and 56, Frene et al. disclosed the interconnected the switching (telecommunication) network (**Fig. 1-2**), comprising:

A plurality of allocated nodes each allocated to one of a number of areas (**Node 1-3 could be considered the areas; and each area having plurality of input/output**

points, which could be the allocated nodes as claimed. See Fig. 1-2 and col 4, lines 40-43, Frene et al.); a plurality of Star Nodes (switch matrix (e.g.  $MB_{1,2}$ ,  $MB_{1,3}$ , or  $MM_{1,2}$ ) could be STAR as claimed. See Fig. 1-2, Frene et al.); point-to-point interconnections between the Allocated Nodes and the STARs (See Fig. 1-2, Frene et al.); a number of areas with allocated nodes which are interconnected to an individual STAR forming a number of routes from the individual STAR (Node 1-2 are interconnected to  $MB'_{1,2}$  forming a number of routes, such as  $21_1$  or  $21_2$ . See Fig. 2.); the Allocated Nodes of a first of the areas being interconnected to a set comprising some, but not all, of the STARs (Node 1 are interconnected to  $MB'_{1,2}$ ,  $MB'_{1,3}$ , but not  $MB'_{2,3}$ . See Fig. 2); further of the areas being similarly interconnected to further sets each comprising STARs (Node 2 and Node 3 are interconnected to other switching matrix, See Fig. 2.); at least one interconnection choice between any two allocated nodes being in different areas (Node 1 can reach Node 2 through  $MB'_{1,2}$ , which would be the choice as claimed. See Fig. 2); and an interconnection route comprising two point-to-point interconnections interconnected in series by one of the STARs (two point interconnections  $21_1$  or  $21_2$  interconnected in series by one of switching matrices. See Fig. 2.) In addition, Frene et al. teaches at least four interconnection choices between each pair of stages (See Fig. 1. it shows more than four choices between each pair of stages.) Frene et al. also teaches a plurality of partially interconnected networks (See col 3, lines 31-34, Frene et al.), and each partially interconnect network having a same number of STARS; and a corresponding STAR of each partially interconnected being interconnected by a respective mesh

network (See Fig. 1-2. The same switch matrix for each partially interconnect network. Fig. 1-2 is a mesh network.)

Regarding claims 30, and 32-33, there is an equal number of choices of routes between any two of the allocated Nodes in different areas, and wherein there is an equal number of routes from each STAR (there is an equal number of choices of routes between node 1 and node 2 and equal number of routes from each switching matrix. See Fig. 1-2.)

Regarding claim 34, there is at least one of the areas contains one allocated node (As shown in Fig. 1-2, the node, which is the area as claimed, contains of the points, which is the allocated node as claimed. See Fig. 1-2, col 4, lines 35-36, Frene et al.)

Regarding claim 35, each point-to-point interconnection comprises a multiple circuit transmission system (The invention of Frene et al. is directly related to transmitting the data and Fig. 1-2 shows the path of transmission on each point-to point interconnection circuit. See Fig. 1-2, col 1, lines 9-10, Frene et al.)

Regarding claim 36, there is at least one of the point-to-point interconnections passes through an AREA cross-connect (the connection shown in Fig. 1-2 is passed through the nodes (areas), which would be cross-connect as claimed. See Fig. 1-2, Frene et al.)

Regarding claim 43, Areas and Stars share sites (Fig. 1-2.)

Regarding claims 45-46, Frene et al. shows STAR (switching matrices) comprises the switches and routing system to perform one way or bothway links (**See col 2, lines 42-45, and Fig. 1-2.**)

Regarding claim 53, Frene et al. shows two switching network structure having the same areas (**N1, N2, or N3**) and different number of stars (**MM or MB**) (**Se Fig. 1-2, Frene et al.**) Frene et al. also teach network interconnect to other network via switching (**See col 3, lines 31-34, Frene et al.**) For the network in Fig. 1 interconnect to the network in Fig. 2, which has an equivalent number of the areas and a lesser number of stars as claimed.

Regarding claim 55, Frene et al. teaches the invention is related to the network for transmitting data, in particular digital data (**See Col 1, lines 9-10, Frene et al.**) The telecommunication network is one of types of systems as above.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 47 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frene et al. (US Pat No. 5,654,956.), in view of Milton et al. (US Pat No. 6,631,018.)

Regarding claims 47 and 49, Frene et al. teaches the network system according to claim 29. Frene et al. does not specifically teach WDM link. However, Milton et al. teach WDM network ring network and teach the WDM network link could be able to take the input from the node to communicate with other nodes, which is taking input and selectively taken to different output WDM links as the multiplexing does (See col 7-8, lines 61-8, and Fig. 13, Milton et al.) Therefore, it would have been obvious to one who has ordinary skill in the art at the time the invention was made to use the WDM link as the routing path for the ring network configuration because it would be able to use for the optical network. In addition, Milton et al. teaches the system could be used for ATM switching network or Sonet network (See col 1, lines 60-64, Milton et al.) , and Milton et al. also teaches WDM system (See col 4, lines 23-24, Milton et al.) Moreover, Frene et al. also teaches the invention could be able to use for any types of network (See col 3, lines 35-37, Frene et al.)

7. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frene et al. (US Pat No. 5,654,956.), in view of Bala et al. (US Pat No. 6,075,631.)

Regarding claim 50, Frene et al. teach the network system according to claim 29. Frene et al. does not teach at least one of the areas is without any of the allocated nodes. However, Bala et al. shows the selectively interconnecting nodes (See col 3, lines 5-8, Bala et al.) and also shows the one of areas (12<sub>1</sub>, Fig. 3, Bala et al.) is without any of the allocated nodes. Therefore, it would have been obvious to one who have ordinary skill in the art at the time the invention was made to have one of the areas is without any of allocated nodes because it would have the advantage for routing while

the path can bypass the unnecessary node. Moreover, Bala et al. teaches ATM switches with the WDM channels (See col 12, lines 18-45, Bala et al.), and Frene et al. also teaches the invention could be able to use for any types of network (See col 3, lines 35-37, Frene et al.)

***Allowable Subject Matter***

8. Claims 31, 37-42, 44, 48, and 51-52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Liou whose telephone number is 571-272-8136. The examiner can normally be reached on 8:00AM - 5:00PM Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jonathan Liou

01/03/2006

  
RICKY Q. NGO  
SUPERVISORY PATENT EXAMINER